



<http://www.evoforums.com/>

How To: Install Magnus Clutch Master Cylinder for Evo X GSR

Hollywood_X of EvoXForums

<http://www.evoforums.com/forums/showthread.php?t=38615>

Please note that any work you do on your own may void your warranty
so do so at your own risk and only if you know what you're doing!

Level of difficulty from 1-10 (1 being easy): 6

Parts Required:

- Magnus CMC kit

Tools Required:

- 10mm, 12mm, 13mm, 14mm end wrenches & sockets
- 12mm deep well socket & 3" extension
- Vice grips or channel locks (Tongue & groove pliers)
- Various common screw drivers
- Needle nose pliers (Curved end preferred)
- End grinder with burr bit or small angle grinder or Dremel with cut off wheel

Recommended Number of People:

- 2

Time to complete

- 4 hours

Below is a burr bit on an end grinder, this is what I used and preferred but please wear safety glasses when grinding or cutting. This is a cold style of cutting so no sparks to cause fires like other grinding methods. This can be used on an air or electric end grinder and cost about \$30 for a good sharp one that will last quite some time.



The only material needed is some DOT 3 or 4 brake fluid to refill your reservoir's when you're done.

Before we get started on the master cylinder we need to clear a few items out of the way to make life easier and less frustrating. I won't go into detail on the basics just an overview.

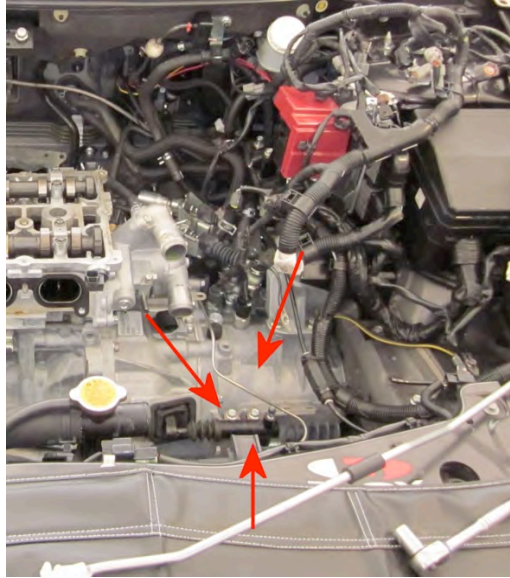
1. Read all the way through this install guide before beginning.
2. Verify you have all the right parts
3. Disconnect the positive battery terminal
4. Remove the strut bar
5. Remove air intake back to turbo
6. Remove positive distribution block and ECU (Including brackets)
7. Remove boost solenoids and vacuum lines

You should have everything that's in the picture below; (Plus DOT 3 or 4 brake fluid)



Step 1:

Now with those items out of the way we can start on removing your existing clutch lines. Below is your slave cylinder remove them 12mm bolt holding the stainless hard line on and start pulling the line back to the firewall.



When you get to one of these clips pull firmly with vise grips or channel locks, then pull the line to you and up to remove line from bracket.



This little gem is your brake booster and brake master cylinder, and it has to be removed.



First pull the harness off and tuck it out of the way.



Now remove the hard line using a 12mm end wrench, you will have to get these pulled out of the way later.



Now unbolt the brake master cylinder



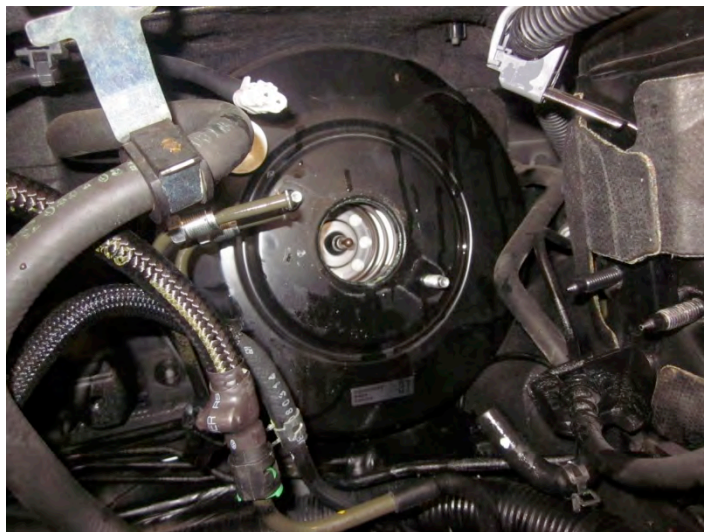
Remove the hose off the reservoir



Pull and remove! **Keep in mind brake fluid eats paint so any drips wipe off ASAP.**



Here is what you're left with, its now time to move inside the car and get down with the pedals.



Step 2:

On the brake pedal you have to remove this pin that holds the brake booster fork.



Now remove these four 12mm bolts



Those bolts just freed up the brake booster to be pulled (Remember to be careful not to bend the hard lines too much) Now since your still under the dash before you pull the boost reach over and unhook your MC's arm it just pushes off.

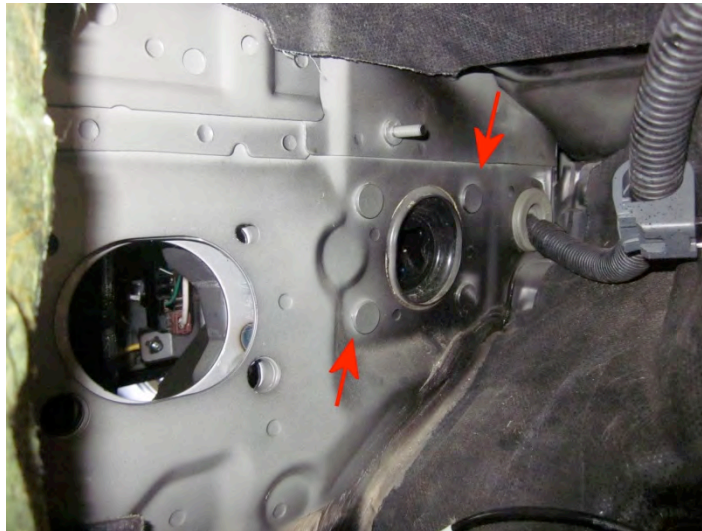


With the big booster out and arm for the MC unhooked grab its body and twist / pull it out.



Step 3:

Now that there are two gaping holes in your firewall let's do some grinding! See the nubs grind them off it's that simple they are holding studs you need out of the way.

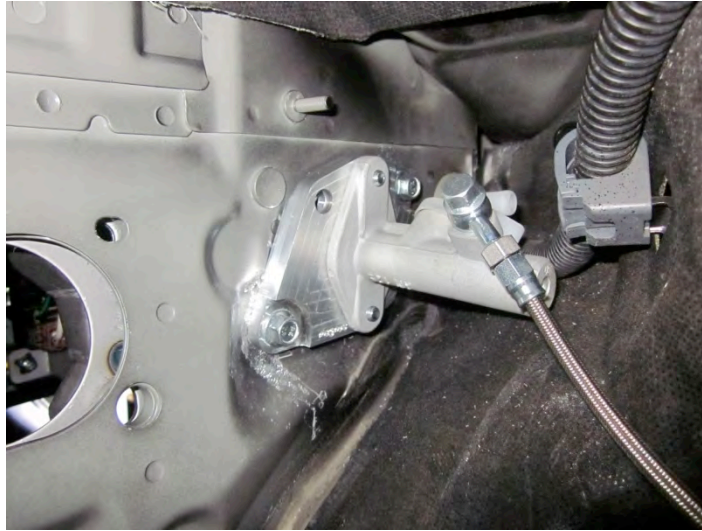


What finished looks like

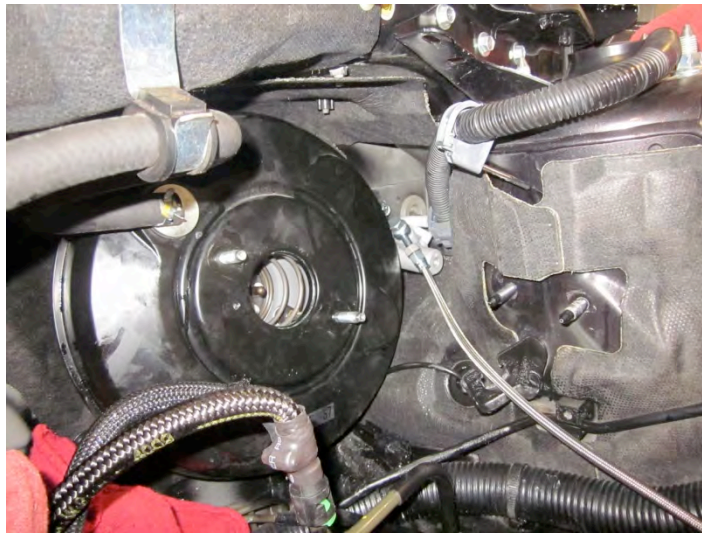


Step 4:

Time to bolt it down now and you may need a second person to hold back up for you



Notice the orientation in the picture above and be sure you orientation is correct it's a tight fit



Now that the brake booster is back on its time to go put its 4 bolts and pin back in as well as get the MC arm secured to the clutch pedal. You know that weird little “L” shaped piece; here’s what it’s for. Slide it over the ball and cinch it down.



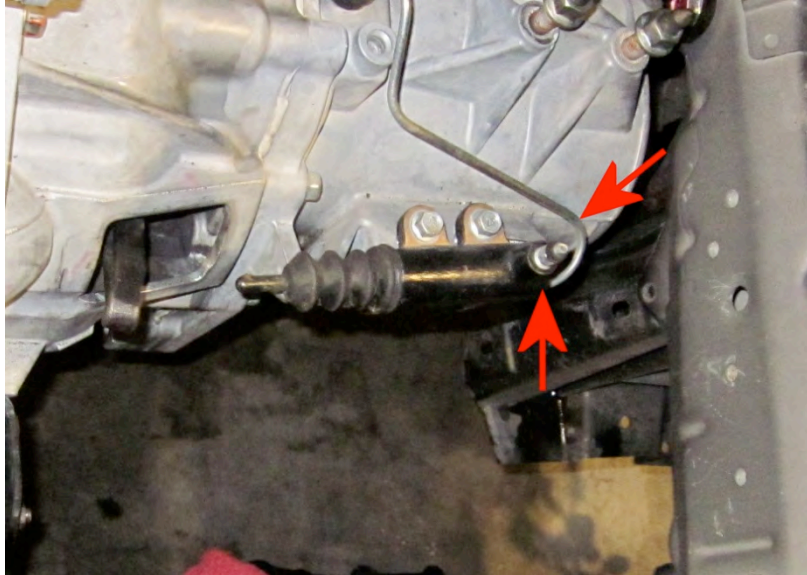
A little better view/ orientation and part fitment to keep in mind when installing.



Now route the braided line back to the slave cylinder mounted on the transmission and install the banjo fitting.

Step 5:

Now you should be ready to bleed the system, I suggest using a vacuum bleeder to ensure you have it done correctly. You want to bleed from the slave cylinder on the transmission; it has a bleeder nipple on the top of it.



Loosen the bleeder and pump the clutch a few times then hold. Add fluid to the reservoir as needed and repeat until clutch is firm and actuating the slave as designed. If by chance the slave gets stuck use a screw driver to pry it back.

Once you have that bled of its time to move onto the brakes since you depleted that reservoir as well. Start with the farthest brakes and work your way forward. Passenger side rear – driver side rear – passenger side front – driver side front. Repeat until your brakes don't feel spongy.

As always double check everything before going for a test run and feedback is always appreciated.

Parts can be found at;

<http://magnusmotorsports.com/> Contact Marco with issues or concerns